

Amendments to the Claims:

This listing of claims replaces all prior versions and listings of claims in the application:

Listing of Claims:

1. (Currently amended) An intelligent electronic device connected to interact with a power system, the device comprising:

a power system interface circuit for communicating with the power system;  
a processor coupled to the power system interface circuit; and  
memory storing software instructions performed by the processor for:  
receiving electronic mail from a remote system through a communication link, ~~and for~~  
automatically transmitting electronic mail to the remote system through the  
communication link; and  
validating the remote system before accepting electronic mail from the remote system.

2. (Currently amended) The device of claim [[1]] 49 in which the electronic mail includes information relating to operation of one or more of: the power system and the device.

3. (Currently amended) The device of claim [[1]] 49 in which the memory stores software instructions performed by the processor for receiving input from the power system interface circuit relating to operation of the power system.

4. (Currently amended) The device of claim [[1]] 49 in which the memory stores software instructions performed by the processor for sending output to the power system interface circuit to operate a fault protection device when input received from the power system interface circuit indicates a fault event in the power system.

5. (Currently amended) The device of claim [[1]] 49 further comprising a second memory storing temporary data to be used by the processor for ~~transmitting and~~ receiving electronic mail to and from the remote system.

6. (Original) The device of claim 5 in which the second memory stores temporary data relating to the power system or to the intelligent electronic device, the temporary data including one or more of: status reports, measurement data, event records, status change data, and documentation files.

7. (Currently amended) The device of claim [[1]] 49 in which the memory stores software instructions performed by the processor for validating the remote system before accepting electronic mail from the remote system.

8. (Currently amended) The device of claim [[1]] 49 in which the memory stores software instructions performed by the processor for interpreting electronic mail that includes one or more of: settings, configuration, operating code, requests for information, and one or more commands.

9. (Currently amended) The device of claim [[1]] 49 in which the memory stores software instructions performed by the processor for receiving within the electronic mail a request for information relating to operation of one or more of the power system and the device.

10. (Original) The device of claim 9 in which the memory stores software instructions performed by the processor for interpreting a request for information that includes one or more of: a request for current configuration of the power system or the device, a request for a data file of the measurements for the last time period, a request for a snapshot of the last operation of the power system or the device, and a request to change a single operating parameter of the power system or the device.

11. (Currently amended) The device of claim [[1]] 49 in which the memory stores software instructions performed by the processor for receiving within the electronic mail a command.

12. (Original) The device of claim 11 in which the memory stores software instructions performed by the processor (i) for validating the command, (ii) for interpreting the command, (iii) for sending confirmation to the remote system of the validated command, (iv) for receiving assurance of the command from the remote system, and (v) for executing the command if the assurance is received.

13. (Original) The device of claim 1 in which the memory stores software instructions performed by the processor for encoding at least a portion of the electronic mail as ASCII text and for interpreting at least a portion of the electronic mail as ASCII text.

14. (Original) The device of claim 1 in which the memory stores software instructions performed by the processor for encoding at least a portion of the electronic mail as HTML-formatted text and for interpreting at least a portion of the electronic mail as HTML-formatted text.

15. (Original) The device of claim 1 in which the memory stores software instructions performed by the processor for encoding at least a portion of the electronic mail as XML-formatted text and for interpreting at least a portion of the electronic mail as XML-formatted text.

16. (Original) The device of claim 1 in which the memory stores software instructions performed by the processor (i) for encoding data in binary format, and (ii) for attaching the encoded data to electronic mail that will be transmitted.

17. (Original) The device of claim 1 in which the memory stores software instructions performed by the processor for interpreting data encoded in a binary format as an attachment in a received electronic mail.

18. (Original) The device of claim 1 in which the memory stores software instructions performed by the processor (i) for encoding data in MIME, (ii) for attaching the encoded data to electronic mail that will be transmitted.

19. (Original) The device of claim 1 in which the memory stores software instructions performed by the processor for interpreting data encoded in MIME as an attachment in a received electronic mail.

20. (Original) The device of claim 1 in which the memory stores software instructions performed by the processor for formatting one or more of: status changes, new data, alarms, event records, oscillographic records, and documentation files within electronic mail that is transmitted.

21. (Original) The device of claim 1 in which the memory stores software instructions performed by the processor for transmitting electronic mail to the remote system including a distribution list of remote users.

22. (Currently amended) The device of claim [[1]] 49 in which the remote system comprises one or more of a computer, a cellular telephone, a personal digital assistant, a pager, and a television system.

23. (Currently amended) The device of claim [[1]] 49 in which the memory stores temporary data to be used by the processor for ~~transmitting and~~ receiving electronic mail to and from the remote system.

24. (Original) The device of claim 23 in which the memory stores temporary data relating to the power system or to the device, the temporary data including one or more of status reports, measurement data, event records, status change data, and documentation files.

25. (Original) The device of claim 1 in which the memory stores instructions performed by the processor for receiving instant messages from a remote system through a communication link and for automatically transmitting instant messages to the remote system through the communication link.

26. (Currently amended) An apparatus for interacting with a power system, the apparatus comprising:  
an intelligent electronic device connected to the power system; and  
a system remote from the intelligent electronic device and connected to the intelligent electronic device through a communication link;  
in which the intelligent electronic device comprises:  
a power system interface circuit in communication with the power system,  
a processor, and  
memory storing software instructions performed by the processor for receiving electronic mail from the remote system through the communication link, ~~and~~ for transmitting electronic mail to the remote system through the communication link, and for validating the remote system before accepting electronic mail from the remote system.

27. (Currently amended) The ~~apparatus~~ device of claim ~~26~~ 50 in which the electronic mail includes information relating to operation of one or more of the power system and the intelligent electronic device.

28. (Currently amended) The ~~apparatus~~ device of claim ~~26~~ 50 in which the memory stores software instructions performed by the processor for receiving input from the power system interface circuit relating to operation of the power system.

29. (Currently amended) The ~~apparatus~~ device of claim ~~26~~ 50 in which the memory stores software instructions performed by the processor for sending output to the power system interface circuit to operate a fault protection device when input received from the power system interface circuit indicates a fault event in the power system.

30. (Currently amended) The ~~apparatus~~ device of claim ~~26~~ 50 in which the intelligent electronic device comprises a second memory storing temporary data to be used by the processor for transmitting ~~and receiving~~ electronic mail to and from the remote system.

31. (Currently amended) The ~~apparatus~~ device of claim 30 in which the second memory stores temporary data relating to the power system or to the intelligent electronic device, the temporary data including one or more of: status reports, measurement data, event records, status change data, and documentation files.

32. (Canceled)

33. (Currently amended) The ~~apparatus~~ device of claim ~~26~~ 50 in which the memory stores software instructions performed by the processor for interpreting electronic mail that includes settings, configuration, operating code, requests for information, or one or more commands.

34. (Original) The apparatus of claim 26 in which the memory stores software instructions performed by the processor for receiving within the electronic mail a request for information relating to operation of the power system.

35. (Original) The apparatus of claim 34 in which the memory stores software instructions performed by the processor for interpreting a request for information that includes one or more of: a request for current configuration of the power system or the device, a request for a data file of the measurements for the last time period, a request for a snapshot of the last operation of the power system or the device, and a request to change a single operating parameter of the power system or the device.

36. (Original) The apparatus of claim 26 in which the memory stores software instructions performed by the processor for receiving within the electronic mail a command.

37. (Original) The apparatus of claim 36 in which the memory stores software instructions performed by the processor (i) for validating the command, (ii) for interpreting the command, (iii) for sending confirmation to the remote system of the validated command, (iv) for receiving assurance of the command from the remote system, and (v) for executing the command if the assurance is received.

38. (Original) The apparatus of claim 26 in which the memory stores software instructions performed by the processor for encoding at least a portion of the electronic mail as ASCII text and for interpreting at least a portion of the electronic mail as ASCII text.

39. (Original) The apparatus of claim 26 in which the memory stores software instructions performed by the processor for encoding at least a portion of the electronic mail as

HTML-formatted text and for interpreting at least a portion of the electronic mail as HTML-formatted text.

40. (Original) The apparatus of claim 26 in which the memory stores software instructions performed by the processor for encoding at least a portion of the electronic mail as XML-formatted text and for interpreting at least a portion of the electronic mail as XML-formatted text.

41. (Original) The apparatus of claim 26 in which the memory stores software instructions performed by the processor (i) for encoding data in binary format, and (ii) for attaching the encoded data to electronic mail that will be transmitted.

42. (Original) The apparatus of claim 26 in which the memory stores software instructions performed by the processor for interpreting data encoded in a binary format as an attachment in a received electronic mail.

43. (Original) The apparatus of claim 26 in which the memory stores software instructions performed by the processor (i) for encoding data in MIME, (ii) for attaching the encoded data to electronic mail that will be transmitted.

44. (Original) The apparatus of claim 26 in which the memory stores software instructions performed by the processor for interpreting data encoded in MIME as an attachment in a received electronic mail.

45. (Original) The apparatus of claim 26 in which the memory stores software instructions performed by the processor for formatting one or more of: status changes, new data, alarms, event records, oscillographic records, and documentation files within electronic mail that is transmitted.



46. (Currently amended) The ~~apparatus~~ device of claim ~~26~~ 50 in which the memory stores software instructions performed by the processor for transmitting electronic mail to the remote system including a distribution list of remote users.

47. (Currently amended) The ~~apparatus~~ device of claim ~~26~~ 50 in which the remote system comprises one or more of a computer, a cellular telephone, a personal digital assistant, a pager, and a television system.

48. (Currently amended) An intelligent electronic device connected to interact with a power system, the device comprising:

a power system interface circuit for communicating with ~~the~~ power system components used for the distribution or dissemination of electric power in the power system;

a processor coupled to the power system interface circuit; and

memory storing software instructions performed by the processor for receiving an instant message from a remote system through a communication link and for automatically transmitting an instant message to the remote system through the communication link.

49. (Previously presented) An intelligent electronic device connected to interact with a power system, the device comprising:

a power system interface circuit for communicating with power system components used for the distribution or dissemination of electric power in the power system;

a processor coupled to the power system interface circuit; and

memory storing software instructions performed by the processor for receiving electronic mail from a remote system through a communication link.

50. (Previously presented) An intelligent electronic device connected to interact with a power system, the device comprising:

a power system interface circuit for communicating with power system components used for the distribution or dissemination of electric power in the power system;  
a processor coupled to the power system interface circuit; and  
memory storing software instructions performed by the processor for automatically transmitting electronic mail to a remote system through a communication link.

51. (Previously presented) A computer readable medium having embodied thereon a computer program for processing by an intelligent electronic device connected to interact with components of a power system, the computer program comprising:

a first code segment to receive input from power system components used for the distribution or dissemination of electric power in the power system, the input relating to operation of the power system;

a second code segment to send output to the power system to operate a fault protection device when input received from the power system indicates a fault event in the power system;  
and

a third code segment to receive electronic mail from a remote system through a communication link.

52. (Original) The computer readable medium of claim 51 in which the computer program further comprises a fourth code segment to validate the remote system before accepting electronic mail from the remote system.

53. (Previously presented) A computer readable medium having embodied thereon a computer program for processing by an intelligent electronic device connected to interact with components of a power system, the computer program comprising:

a first code segment to receive input from power system components used for the distribution or dissemination of electric power in the power system, the input relating to operation of the power system;

a second code segment to send output to the power system to operate a fault protection device when input received from the power system indicates a fault event in the power system; and

a third code segment to automatically transmit electronic mail to a remote system through a communication link.